

RECEIVED  
CENTRAL FAX CENTER

JUN 24 2004

## FAX COVER SHEET

Address (line 1)  
Address (line 2)  
City, State or Province ZIP or Postal Code  
Phone number  
Fax number

OFFICIAL

Send to: <b>U.S. Patent And Trademark Office</b>	From: <b>Joseph E. Currie</b>
Attention: <b>John A. Ward, Patent Examiner</b>	Date: <b>June 24, 2004</b>
Office location:	Office location: <b>506 white Plains Rd., Webster, NH 03303-7112</b>
Fax number: <b>(703) 872-9308</b>	Phone number: <b>(603) 456-2428</b>

☐ Urgent ☐ Reply ASAP ☐ Please comment ☐ Please review ☐ For your information

Total pages, including cover: 10

## Comments:

Included please find:

Transmittal Form	1 Pg.
Fee Transmittal Form	1 Pg.
Credit Card Pmnt. Form	1 Pg.
Information Disclosure Statement	2 Pgs.
Claims	4 Ps.

10 Pgs. (Including Cover sheet)

**RECEIVED  
CENTRAL FAX CENTER**

JUN 24 2004

**OFFICIAL**

What is claimed as new is as follows:

1. A motor vehicle illumination device designed to mount within a motor vehicle side body so that an external cover surface of said illumination device is approximately flush with a motor vehicle side body external surface and contour, said illumination device comprising:

a least a first component and at least a second component;

said first component comprising at least one elongate light reflective surface printed circuit board upon which are mounted solid state illumination means, an elongate optically transmissive injection molded acrylic piece with said printed circuit board positioned within and oriented to transmit illumination through at least one elongate first outside surface of said acrylic piece, said acrylic piece having molded light diffusing means on at least said first outside surface;

said second component comprising an optically transmissive, injection molded, UV resistant, polycarbonate cover with an inner first side surface shaped to fit against all facets of said first components' first outside surface molded light diffusing means;

said second components' inner first side surface is securely attached to said first components' first outside surface by ultra-sonic welding.

2. The first component as claimed in claim 1, wherein said first component may be composed of optically clear, optically opaque, colored or color tinted acrylic or other plastic.
3. The reflective surface printed circuit board as claimed in claim 1, wherein both side one and side two of said printed circuit board are optically reflective and both side one and side two have multiple colored illumination means mounted thereon.

4. The illumination diffusing means on a first outside surface of a first component as claimed in claim 1, wherein the diffusing means may be "V" shaped indentations in any orientation on one or more outside surfaces.
5. The illumination diffusing means as claimed in claim 4, wherein the illumination diffusing means is any surface distortion caused by mechanical, chemical or gas frosting of the surface.
6. The second component polycarbonate cover as claimed in claim 1, wherein said polycarbonate cover second side, or outside, is formed to fit into an opening in an outside surface of a motor vehicle and to conform to the outside surface contour of said motor vehicle.
7. The second component polycarbonate cover as claimed in claim 6, wherein the polycarbonate cover second side may be optically clear, opaque, or frosted.
8. The second component polycarbonate cover as claimed in claim 1, wherein the second component may be secured to the first component by snap-fit retention, mechanical fasteners, or other fastening means.
9. The second components' inner first side surface as claimed in claim 1, wherein said inner first side surface is attached to a first components first outside surface in a co-extrusion process whereby two or more extruded plastic components in a hot and soft plastic state are joined together as they are co-extruded.
10. The first component as claimed in claim 1, wherein an optically transmissive, injection molded UV resistant polycarbonate second cover, with an inner first side surface is secured by said surface to a second matching outside surface of said first component.

11. The second cover as claimed in claim 10, wherein the first side of said second cover is attached to a first component second outside surface in a co-extrusion process, whereby two or more co-extruded plastic components in a hot and plastic state are joined together as they are formed.
12. A vehicle illumination device designed to mount within a vehicle wall and flush mount with at least the vehicle inner or outer surface and to illuminate both toward the outside of the vehicle and toward the inside of the vehicle, said illumination device comprising:

a first component that is insertion injection molded, a second component that is injection molded, and a third component that is injection molded;

the first insertion injection molded component is comprised of a first LED mounting board positioned in a plastic injection mold near the top, with the LEDs facing downward, and a second LED mounting board positioned in said injection mold near the bottom with the LEDs facing up;

additionally, individual or cluster LEDs are inserted into said injection mold positioned to direct illumination from at least a first end of the insertion injected molded component toward a second end;

also a double sided optically reflective means is positioned diagonally in the injection mold, substantially from a first end to a second end of the mold, so that illumination from the downward directed LEDs of said first mounting board is reflected out of a second side of said insertion injected component, and illumination directed upward from said second LED mounting board is reflected out of a first side of said insertion injected component;

said injection molded component has a first side, or outside, with molded light diffusing means, and a second side with no light diffusing means;

the second injection molded component is comprised of an optically transmissive, UV resistant polycarbonate cover with an inner first side designed to fit against all facets of the illumination diffusing means of the first components' first side;

the third injection molded component is comprised of an optically transmissive, UV resistant polycarbonate cover with an inner first side surface designed to fit against the second side of the first component.

- 13 The second and third injection molded component polycarbonate covers as claimed in claim 12, wherein said covers may have an extended lip or edge for snap-fit retention, or other anchoring means, for one or more removable colored lenses.